

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 09/832,827

Our Ref.: Q64035  
Art Unit: 2874

### REMARKS

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority under 35 U.S.C. § 119(a)-(d), and for confirming that the certified copy of the priority document has been received at the Patent Office.

#### Information Disclosure Statement:

Applicant herewith submits an additional Information Disclosure Statement along with a new Form PTO/SB/08 A & B (modified) (substitute for PTO Form 1449), along with a concise statement of the relevance of the references previously not considered by the Examiner. Further, Applicant notes that duplicate copies of the references have not been submitted as the references were previously submitted to the United States Patent and Trademark Office on April 12, 2001.

#### Claim Amendment:

Applicant notes that claims 1 and 5 have been amended as shown in the attached Appendix to more clearly claim the present invention, and submits that the amendments to claims are not intended to narrow the scope or spirit of the original claims in any way.

#### Claim Rejections:

Claims 1-11 are all the claims pending in the application, and currently all of the claims stand rejected.

#### *35 U.S.C. § 102(b) Rejection - Claims 1-2 and 5:*

Claims 1-2 and 5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,943,455 to Travieso et al. In view of the following discussion, Applicant respectfully disagrees.

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Travieso discloses an optical waveguide (OASIC) 10 which is mounted in a substrate 11, where a plurality of optical fibers are secured into the substrate 11, and where the ends of the fibers are secured to the waveguide 10. *See* col. 3, lines 14-25. However, there is no disclosure of at least partially inserting fibers in at least some of the troughs of the waveguide 10.

Applicant has found no disclosure in Travieso of at least partially inserting fibers within some of the troughs in a waveguide structure. *See* claim 1. There is no discussion, teaching or suggestion of any kind that fibers are placed in the waveguide 10, as claimed in the above referenced application.

Therefore, for at least the reason set forth above, Applicant respectfully submits that Travieso fails to disclose each and every aspect of the claimed invention as set forth in claim 1, and hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 102(b) rejection of this claim. Further, as claim 2 depends on claim 1, and because claim 5 includes a similar limitation as to that discussed in claim 1, Applicant submits that these claims are also allowable, for at least the same reason discussed above.

***35 U.S.C. § 103(a) Rejection - Claims 3-4 and 7-11:***

Claims 3-4 and 7-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Travieso in view of *Integrated Optics and Micro-Optics with Polymers*, by Ehrfeld et al. Since claims 3-4 depend on claim 1, and because Ehrfeld fails to cure the deficient disclosure and teachings of Travieso (discussed above), Applicant respectfully submits that these claims are also allowable, at least by reason of their dependency.

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With regard to claim 7, neither the Travieso or Ehrfeld references, either individually or in combination, teach or suggest a method of producing an optical waveguide structure having, *inter alia*, "fibers in a portion of the troughs" and/or where "fibers are arranged in the troughs in the area of the crossings in such a way that they cross in the area of the crossing." See claim 7. Neither Travieso nor Ehrfeld disclose, teach or suggest placing fibers in a portion of the troughs on the waveguide structure.

Therefore, Applicant respectfully submits that, for at least the reason stated above, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 7, and hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of this claim. Further, as claims 8-11 depend on claim 7, Applicant submits that these claims are also allowable, at least by reason of their dependency.

**35 U.S.C. § 103(a) Rejection - Claim 6:**

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Travieso in view of U.S. Patent No. 6,115,515 to Itoh et al. Since claim 6 depends on claim 5, and because Itoh fails to cure the deficient teachings of Travieso with respect to claim 5, Applicant submits that claim 6 is also allowable, at least by reason of its dependency.

**Conclusion:**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

The claims are amended as follows:

1. (Amended) An optical waveguide structure, having a crossing and a branching, the waveguide structure comprising, in the area of said branching, planar waveguides, ~~said planar waveguides~~ comprising a waveguide material that is put into troughs formed in a substrate, said waveguide material having a refractive index higher than the material delimiting the troughs, said waveguide structure further comprising, in the area of said crossing, fibers which cross in the area of said crossings, and

wherein at least some of said fibers are at least partially inserted into said troughs.

5. (Amended) A multi-layer opto-electrical circuit board, comprising at least one layer with an optical waveguide structure having a crossing and a branching, the waveguide structure comprising, in the area of said branching, planar waveguides, ~~said planar waveguides~~ comprising a waveguide material that is put into troughs formed in a substrate, said waveguide material having a refractive index higher than the material delimiting the troughs, said waveguide structure further comprising, in the area of said crossing, fibers which cross in the area of said crossings, and

wherein at least some of said fibers are at least partially inserted into said troughs.